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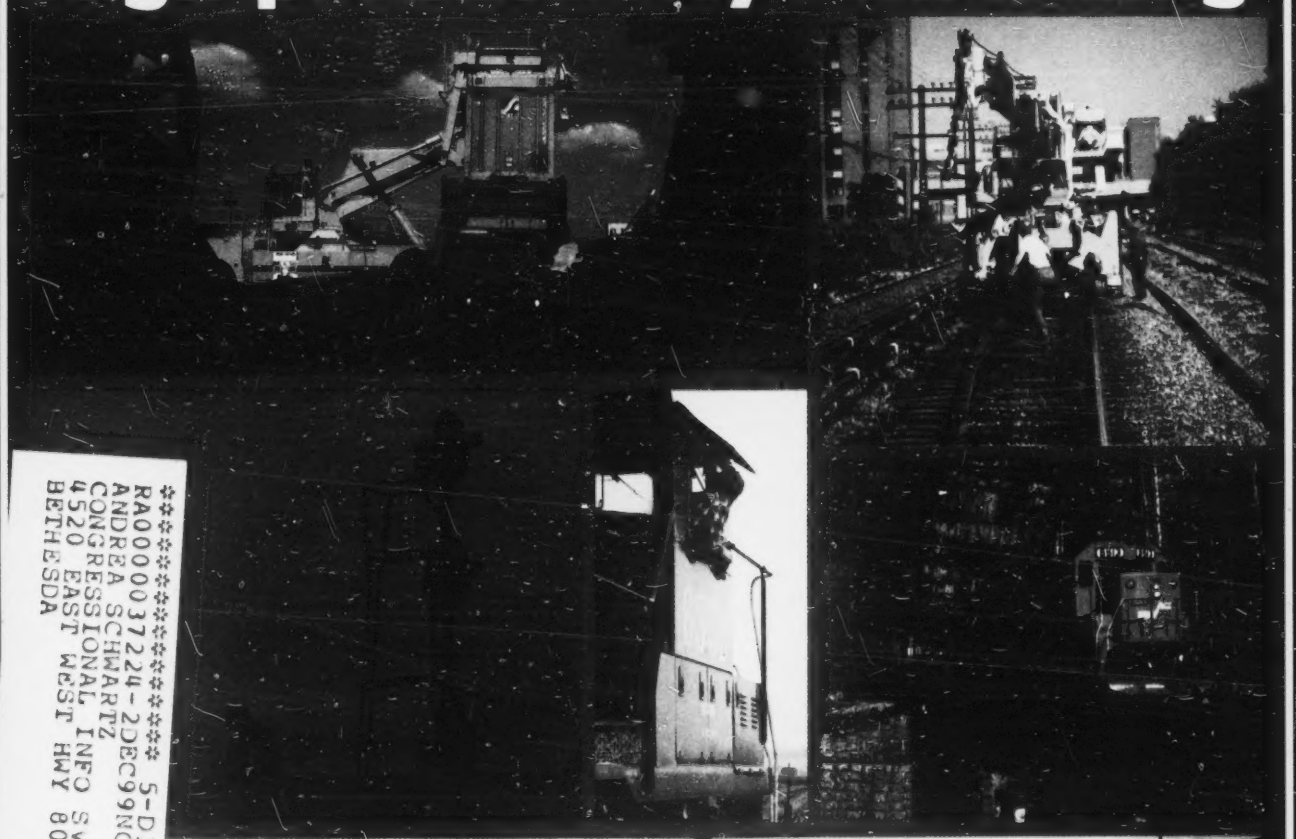
Rail Transit review and outlook

January 1986

RAILWAY AGE

...for the new age of railways

High-productivity railroading



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ANDREA SCHWARTZ
CONGRESSIONAL INFO SVC
4520 EAST WEST HWY 800
BETHESDA MD 20814

RAILWAY AGE
...for the new age of railways
January 1986

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Railroads have made enormous productivity gains—but to survive in a swiftly changing competitive marketplace, they must make their capital and labor dollars work harder.

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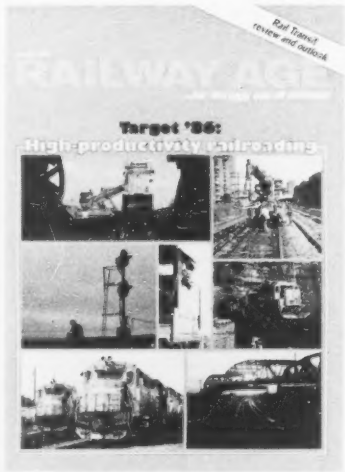
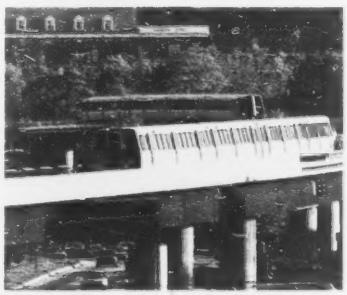


Photos by Kent Patterson except for Seaboard (Thomas R. Schultz) and rails at sunset (Robert G.Lewis).



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Market Outlook

Equipment

Amtrak: Will assemble 50 material handling cars at its Beech Grove, Ind., shops, using 60-foot boxcar bodies supplied by Thrall Car.

CN Rail: Plans to acquire 20 new locomotives and 940 freight cars in 1986 as part of a capital investment program estimated at $470 million (Canadian), down from the $627 million budgeted for 1985.

CP Rail: Will acquire 50 2,000-hp diesel-electric units as part of its 1986 capital program. Other major capital projects will include continuing tunnel construction in western Canada and completion of etc installation between Winnipeg and Thunder Bay. CP says its 1986 capital spending will be "somewhat below" 1985's $600 million (Canadian) due to a flat traffic outlook and the anticipated impact on revenues of deregulation.

Conrail: Ordered 22 3,900-hp C39-8 diesel-electric units from General Electric at a cost of more than $28 million. The six-axle, microprocessor-controlled locomotives, which will be the most powerful in the Conrail fleet, are scheduled for delivery in mid-1986.

GO Transit: Plans to order 8 to 17 commuter-service diesel-electric locomotives in 1986.

Massachusetts Bay Transportation Authority: Will place orders in 1986 for eight diesel-electric locomotives.

Union Pacific System: Ordered 60 3,800-hp SD60 diesel-electric units from the Electro-Motive Division of General Motors at a cost of $75 million. They will be the first microprocessor-equipped locomotives on the UP System.

Facilities

Massachusetts Bay Transportation Authority: General Railway Signal is the apparent low bidder, at $4.2 milion, on a contract for signaling MBTA's 8½-mile Needham Branch extension. Work is to be completed in June 1987.

Revenue freight carloadings

Commodity	Dec. 7 week	Nov. 30 week	Nov. 23 week	Nov. 16 week
Grain	23,997	20,876	29,302	31,088
Other farm products	4,549	3,636	3,976	4,658
Metallic ores	11,847	12,527	14,898	15,044
Coal	107,891	89,615	119,830	110,523
Crushed stone, gravel and sand	10,915	8,334	12,393	12,870
Nonmetallic minerals	11,006	6,958	10,904	10,422
Grain mill products	10,787	8,424	10,358	10,422
Food and kindred products	11,229	8,567	11,443	10,960
Primary forest products	11,120	7,327	11,373	11,702
Lumber and wood products except furniture	6,213	5,101	7,013	6,701
Pulp, paper and allied products	13,895	12,250	12,808	12,921
Chemicals and allied products	24,131	18,992	23,400	23,114
Petroleum products	4,749	3,418	4,518	4,446
Stone, clay and glass products	9,146	7,264	9,368	9,998
Coke	5,099	4,220	5,190	5,015
Metals and products	7,844	7,324	8,471	8,299
Motor vehicles and equipment	22,595	16,307	23,005	22,681
Waste and scrap materials	7,531	5,592	8,076	8,055
Forwarder and shipper assn. traffic	6,208	5,312	6,476	6,567
All other carloads	60,252	47,713	63,516	62,087
LCL traffic	132	136	265	188
Total Cars Loaded	**371,136**	**299,893**	**396,583**	**387,761**
% change from previous year	(2.1)	(22.8)	32.1	2.7
Estimated revenue ton-miles (billions)	17.1	14.0	18.2	17.9
% change from previous year	(2.7)	(22.1)	27.5	2.0

Cumulative Total:	**1985**	**1984**	**% change**
49 weeks	836,1	874,1	(4.4)

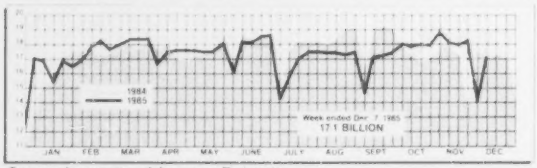
Piggyback loadings

	Nov. 30 week	Nov. 23 week	Nov. 16 week	Nov. 9 week
Trailers/containers	70,689	92,070	91,493	92,871

Cumulative total, 48 weeks		**% change from 1984**
Trailers/containers	4,174,554	(1.4)

Rail freight traffic trends

Billion ton-miles (Estimated)



Source: Association of American Railroads

Freight cars

	DELIVERED			ORDERED			ON ORDER AND UNDELIVERED		
	November	11 months		November	11 months		Dec. 1,	Average Backlog	
	1985	1985	1984	1985	1985	1984	1985	1985	1984
Built new by carbuilders	910	10,745	11,600	350	8,185	14,303	1,834	3,555	6,081
Built new in RR shops	0	406	0	0	0	406	0	25	164
Built new—total	**910**	**11,151**	**11,600**	**350**	**8,185**	**14,709**	**1,834**	**3,580**	**6,245**
Rebuilt	0	0	0	0	0	0	0	0	0
TOTAL	**910**	**11,151**	**11,600**	**350**	**8,185**	**14,709**	**1,834**	**3,580**	**6,245**
Locomotives (new and rebuilt)	50	567	460	N/A	N/A	N/A	75	221	172

Source: Transportation Div., AAR and American Railway Car Institute

Watching Washington

How tax reform would affect rails

Railroads lobbyists face a frenetically busy '86. Reregulation advocates are amassing a $1 million-plus war chest to renew a fight that got nowhere last year. There will be a strong push for a bill now in committee that would apply new antitrust standards to railroads, holding each railroad to be a monopoly if it owns the only rail facilities in a particular community and thus requiring it to share those facilites with other carriers (one pro-railroad Congressman is trying to blunt the thrust of that legislation by insisting that it also cover electric utilities). The battle over the disposal of Conrail will continue in an atmosphere further clouded by the late-1985 offer of $1.6 billion, by Allen & Co. and First Boston Corp., for the railroad (the two other contenders, Norfolk Southern and Morgan Stanley, each offered a base $1.2 billion). But the most critical watch in Washington will be on tax reform legislation.

The Tax Reform Act of 1985, which the President steamrollered through the House the week before Christmas, would cost the railroad industry an average of $733 million a year (over a six-year period) in new taxes—a far bigger bite than either the Treasury I or II proposals, which railroads thought were bad enough. The AAR arrived at this estimate by figuring the impact of the new law on a "composite major railroad" created by averaging the corporate financial reports of Burlington Northern, CSX, Norfolk Southern, Santa Fe Southern Pacific and Union Pacific for the years 1981-84. The averages were adjusted by inflation and other factors to produce estimated financial results for a large composite railroad for 1986-91. Under the bill that has now gone to the Senate, the composite railroad's tax would increase by an annual average of $124 million. By extrapolation, that would amount to a $4.4 billion increase for all railroads during the 1986-91 period.

President Reagan has said he hopes for major revisions in the law in the Senate. So do the railroads.

Average annual impact of tax proposals on the composite major railroad 1986-1991

($ in millions)

Item	Current Law	Ways & Means	Treasury II	Treasury I
Earnings Before Interest Depreciation and Taxes	2,432	2,432	2,432	2,432
Depreciation	1,065	782	952	640
Interest Expense	223	223	223	168
Dividend Expense	0	9	26	97
Excess Depreciation	0	0	97	0
Earnings Before Taxes	1,144	1,418	1,328	1,527
Tax (@ 46, 36, 33, and 33%, Respectively)	526	510	448	504
Capital Gains Tax	35	45	29	29
Investment Tax Credit	-130	0	0	0
Net Tax	431	555	477	533
Annual Tax Increase vs. Current Law		124	45	102

Note: Treasury II provides a tax rate of 39.5% per 1986. THis results in a six-year average of 33.7%.

Source: AAR

ADVERTISING SALES

Charles H. Ellwanger, Vice President-Sales

New York, New England, Quebec
W. Arthur Cubbage
345 Hudson Street
New York, NY 10014
(212) 620-7200

Colorado, Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North & South Dakota, Wisconsin
Glen A. Schlueter
29 E. Madison Street
Chicago, IL 60602
(312) 641-5815

Ohio, Western Pennsylvania, West Virginia, Western New York, Ontario
Nancy Giallonardo
500 Cedar Avenue
Pittsburgh, PA 15212
(412) 231-8168

New York, Mid-Atlantic, Southeast
Barbara Smith
345 Hudson Street
New York, NY 10014
(212) 620-7244

Southwest, Kansas City
Tony Halbert
3024 Sandage Street
Fort Worth, TX 76109
(817) 923-9832

Southern California, Arizona, Utah, Nevada, New Mexico
Fred Klaner, Jr.
3334 East Coast Highway
Suite 307
Corona del Mar, CA 92625
(714) 759-8421

Northern California, Northwest, Western Canada
Chris Vogler
3030 Bridgeway Building
Sausalito, CA 94965
(415) 332-6750

United Kingdom, Scandinavia, Spain, Portugal, and Netherlands
Kenneth J. Hendry, Derek Wood
West House
West Street
Faversham
Kent, ME13 7JB
Tel: 0795 531343
Telex: 96118 ANZEEC G

France, Belgium and French-speaking Switzerland
Gérard Lasfargues
32 Rue Desbordes-Valmore
75116 Paris, France
Tel: 45 04 97 94

Germany, Austria, Eastern Europe, and German-speaking Switzerland
Siegfried D. Kamper
Theodor-Heuss-Str. 4
6078 Neu-Isenburg
West Germany
Tel: 06102 8988
Telex: 4189036 KAEM D

Italy
F. Pecori Giraldi
Promark International
Via G. Frua 8
20146 Milan, Italy
Tel: 46 35 18

Japan
C.H. Yiu
S.G.S. International, Ltd.
Dormi Gotanda un Maison, Room 311
2-9-7 Nishi Gotanda, Shinagawa-ku
Tokyo 141, Japan
Cable: SGSINTERNAL TOKYO

Korea
O-Kyu Park
World Marketing, Inc.
CPO Box 4010
Seoul, Korea

South America
Marcos F. Pipan
Juramento 5274-2 A
1431 Buenos Aires, Argentina
Telex: 22612 TURBO AR

Southeast Asia
Timothy C. Herberlein
China Consultants International
Suite 905, Guardian House
32, Oi Kwan Road
Happy Valley, Hong Kong
Tel: 5-8332181
Telex: 75368 AMRHK HK

Lines on Labor

A crisis in communication?

Conventional wisdom has been proved wrong before—has it ever. But conventional wisdom today says that in the next round of management-labor negotiations, major carriers will opt out of national handling, preferring to go it alone in order to press their individual needs in bargaining. If that happens, there will be implications all over the lot, for the labor organizations and for rail management. And you have to wonder if all concerned have thought about all those implications—and complications.

GUS WELTY

Where labor and management may share a problem is in the area of communication.

Union communications, for the most part, are what the union president wants to communicate. Union publications, those coming out of headquarters, are professionally done, and they have a certain gut impact on issues that concern the whole membership all across the industry. UTU, BRAC and BLE publications seem especially well-done in this regard, and there are others. But union publications done on an individual-property basis are something else. Some do have a professional look and tone. But some also seem more designed to play up the accomplishments of the guy who has his finger on the button that starts the printing press.

At the very least, let's say that with individual bargaining, the grand lodge could have a problem in keeping up with what's going on and then in disseminating policy. Let's also say that local publications, the officers who put them out, could have a problem in knowing how to react to an aggressive management position and how to gauge reaction.

Individual railroads, on the other hand, have communications tools in place. Not many company publications are issued as often as they should be, and some don't have the staff resources that they might have.

But it should come as no surprise to any astute observer of company publications to hear that in the past few years most of those publications have improved tremendously in both appearance and content.

Railroad publications today have the look of class about them. More important, railroad publications today are tackling tough issues—the competitive factors, the need for increased productivity, the rationale behind alcohol and drug abuse programs and rules, that sort of hard stuff.

But a switch from national bargaining to individual-property bargaining might also bring a problem for management that its communicators would also have to tackle.

That's the problem of trust.

Under national-handling, negotiations are once-removed. It's an "industry" that individual employees know that their unions are dealing with.

Under local-bargaining, negotiations are right there. Employees on a given railroad know that this is the specific management group their representatives are dealing with.

Letters that come in to "Lines on Labor" from union members deal with a variety of perceived problems. There are objections to the raises and bonuses given top management people when railroads are poor-mouthing about wage increases for the rank-and-file. Those are the easy ones to answer, because in this day and age an excellent chief executive officer or chief operating officer probably is worth his weight in gold. But then there are the letters that cite chapter and verse on double-standards, on how union members and supervisors are treated if a union guy and a supervisor committed similar offenses and they aren't disciplined similarly. There are the letters alleging that low-level supervisors treated customers badly, cancelling switches and blaming high labor costs for it, thereby losing high-rated traffic, when high labor costs—again allegedly—aren't much of a factor. There are letters, and an occasional phone call, from people whose union jobs range from yardman to engineer to general chairman.

With a rare exception or two, these are not crank letters, crank calls.

These are communications from employees who want their railroad, their employer, to succeed. These are communications from people who care.

Union employees, too many times, say that they read or hear what top railroad management says and that they then see what lower-level management does—and that there isn't a whole lot of correlation between the two.

So, if it comes to individual bargaining, management's job isn't just in communicating more effectively with union folks. Management also must communicate better with its own.

Class 1 railroad employment

Employee Group	No. of employees, mid-month count September 1985	Percent of change September 1985 from September 1984	Percent of change September 1985 from August 1985
Total—all employees	299,256	d 9.79	d 1.99
Executives, officials and staff assistants	13,490	d 3.05	d 1.08
Professional and administrative	56,109	d 7.94	d 1.05
Maintenance of way and structures	64,057	d 10.55	d 4.65
Maintenance of equipment and stores	54,503	d 11.95	d 1.17
Transportation (other than train and engine)	19,598	d 15.23	d .31
Transportation (train and engine)	91,499	d 8.71	d 1.61

Source: ICC

Update

China picks GRS as a partner in Shanghai signaling venture

The People's Republic of China has been looking for a railway signaling company to set up shop in China. The General Railway Signal Co. of Rochester, N.Y., has been looking for new world markets. A few weeks ago, after nearly a year and a half of negotiations, the two got together and agreed to establish a joint venture to be known as CASCO Signal Ltd., which will have its headquarters and its first factory in Shanghai, where it will manufacture etc systems, classification yard controls, grade crossing warning devices, and hotbox detectors. GRS and CASCO's Chinese parent, the China Railway Signal and Communications Corp., will jointly invest an initial $4.8 million in the enterprise. The first products will be for installation on Chinese railways. Gradually CASCO hopes to get into the international export market.

The announcement of the joint venture agreement, which was made Dec. 10, climaxed a negotiating process that began in August 1984, with the China United Trading Corp. and the China Economic and Trade Consultants Corp. participating.

The Chinese principal in the agreement, China Railway Signal and Communications Corp., is the only railway signal company in the People's Republic. It has three engineering subsidiaries, ten factories, a research and design department, and employs more than 20,000 people.

GRS President Gerald Collins was jubilant over the agreement, noting that the Rochester-based company had won out in the Chinese negotiations in competition with signaling companies in Britain, France, West Germany, Sweden and Japan. He sees a big market in China, which now has some 31,000 route miles of railroad and expects to have 48,000 miles by the turn of the century. Until new factories in China go into operation, said Collins, some equipment will be supplied from Rochester. He is also optimistic for the development of an export market out of China. Rochester's own exports, he notes, have dwindled as the dollar has grown stronger.

Earnings slump along with traffic

A 5% decline in revenue ton-miles in last year's first three quarters translated into a 21.7% plunge in Class I railroad ordinary (net) income. Earnings for the period dropped from $2.166 billion in 1984 to $1.694 billion in 1985. The decline was nationwide: 23.2% in the West, 21.6% in the East, 18.8% in the South.

Operating revenues for the nine-month period went from $22.242 billion in 1984 to $20.863 billion last year, down 6.2%. Operating expenses were down only 4%, from $19.281 billion to $18.506 billion. The result was a 20.4% decline in net revenue from operations.

For the third quarter, Class I ordinary income was $765.4 million (down 15.5% from a year earlier) on operating revenues of $6.743 billion (down 8.3%). Third-quarter operating expenses, $5.914 billion, were down 6.1%.

For the 12 months ended last Sept. 30, the Class I rate of return on net investment was 4.63%—about ten percentage points below what the Interstate Commerce Commission has ruled to be a reasonable rate of return.

Class I Railroads in the United States

For the Third Quarter

	1985 (millions)	1984 (millions)
Operating Revenues	$6,743.4	$7,354.4
Operating Expenses	5,914.5	6,302.5
Net Revenue from Operations		
United States	828.9	1,051.9
Eastern District	255.6	325.3
Southern District	185.9	192.7
Western District	387.4	533.9
Ordinary Income		
United States	646.2	765.4
Eastern District	233.6	285.5
Southern District	112.0	141.3
Western District	300.5	338.6

For the First Nine Months

Operating Revenues	$20,862.6	$22,242.3
Operating Expenses	18,506.2	19,281.2
Net Revenue from Operations		
United States	$2,356.5	$2,961.1
Eastern District	737.4	907.4
Southern District	553.5	649.4
Western District	1,065.6	1,404.3
Ordinary Income		
United States	1,694.4	2,166.4
Eastern District	624.4	796.9
Southern District	353.6	435.9
Western District	716.4	933.6
Rate of Return on Net Investment (12 months ended Sept. 30 - preliminary)	4.63%	4.41%

Source: AAR

Thrall wins nod on RoadRailer

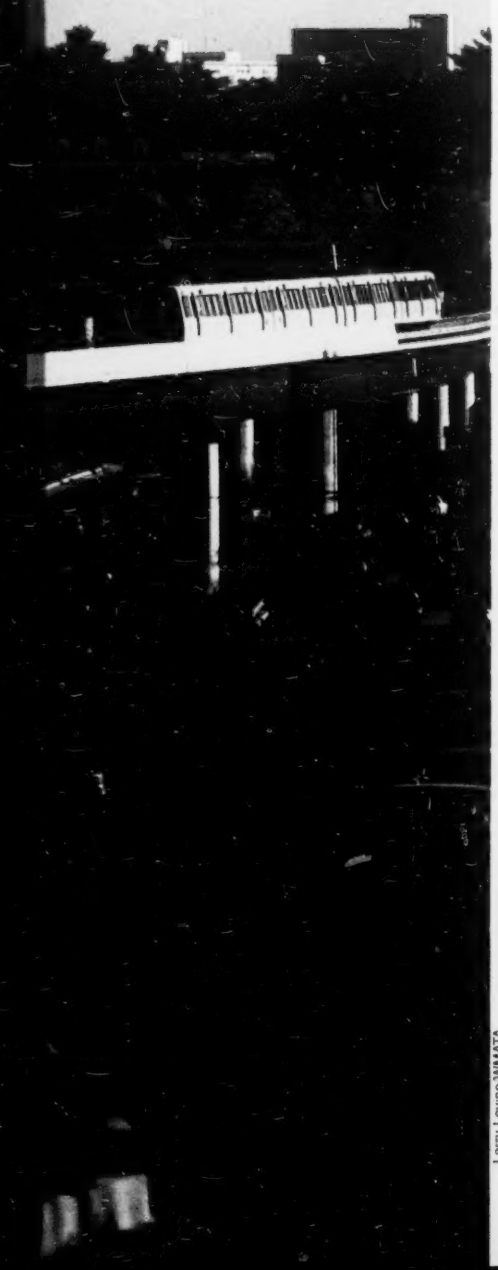
Thrall Car now has bankruptcy court approval of an agreement with North American Car and its creditors under which Thrall will purchase all of North American Car's stock interest in Bi-Modal Corp., developer of RoadRailer.

In a separate transaction, Thrall has also acquired the railcar product lines and patents of Maxson Corp., a manufacturer of such special equipment as depressed center flatcars.

Rail transit review and outlook

A growth industry

Don't believe what you hear about rail transit from the Reagan Administration: There's abundant and measurable evidence all across the land that it's working, and working very well.



Larry Levine/WMATA

As 1986 dawns across the continent, the impact of new rail transit projects on public transportation patterns is showing ever more clearly the great wisdom with which many of these projects were conceived. The doomsayers have meager evidence to support their dire predictions.

From Boston to San Diego and from Buffalo to Atlanta, the commuting public has become ever more enamored of and dependent upon the vast improvements taking place in the rail transit industry. Only the federal Administration seems oblivious to the obvious. On several occasions, Congress has had to chasten the Urban Mass Transportation Administration and the Office of Management and Budget when they tried to divert rail funding to non-rail purposes not authorized by the Congress.

Light rail systems in Cleveland, Newark, Pittsburgh and San Diego averaged 11% more riders in the first three quarters of 1985 than they carried during the same months of 1984, and the trend is up. Rail rapid transit (heavy rail) systems outside New York gained 7.5% over the previous year. As a control statistic, the flexible and ubiquitous transit bus gained 0.8% nationwide over the previous year. Greyhound has signaled its intention to ease out of the bus business via the franchise route and the abandonment of minor lines, while Amtrak reported a 7% gain in intercity rail patronage, despite periodic fare increases.

Urban highway traffic conditions are becoming ever more chaotic. In Fairfax County, Va., and in Phoenix, Ariz., voters approved large bond issues and tax increases to provide local subsidies to supplement lagging state highway funds—which all concerned agree are woefully inadequate for the tasks of maintaining and updating the road network. It is increasingly clear that highways lack the necessary capacity to adequately serve the radial commuting movements in major metropolitan areas. Even with adequate funding, which is not likely, the physical disruptions of building adequate highway capacity in major cities would destroy the vitality of the cities these roads were intended to serve. Vast acres of paving and parking lots do not stimulate business or generate real estate taxes.

Traffic congestion in the suburbs proves that business cannot retreat there to escape. Indeed, traffic problems are compounded with large increases in vehicle-miles traveled to cover longer commuting distances not served by good transit. No one can continue to claim that "highways pay their own way." Over $10 billion a year is needed from other sources to supplement highway user fees, and significant increases in these fees are predicted all across the country to meet the twin challenges of improved fuel economy and deteriorating infrastructure.

• **Metrorail: A capital investment.** The Washington Metropolitan Area Council of Governments (COG) recently released its 1985 cordon count, which showed that transit use was up 14% over 1983 and 37% over 1977, the last all-bus year across the cordon. With the completion of I-66, auto travel also increased 3% in two years. For the first time since the Second World War, when Washington still had streetcars, rail transit carried more passengers across the cordon than buses did. Since Metrorail service began in 1976, transit riders on both modes (rail and bus) have increased 50% and revenue is up an astounding 221%. District of Columbia traffic officials have found that the shift to transit has resulted in the speed-up of highway traffic. The distance covered in 25 minutes on East Capitol Street in the rush hour has increased from 3.2 miles to 9.0 miles. In Alexandria, state and city officials reported traffic moved twice as fast after Metrorail came to town at the end of 1983.

Congressman Stan Parris (R.-Va.), a conservative, discovered that 70% of his constituents favor inauguration of commuter rail service between Virginia and Washington, D.C. CSX and Norfolk Southern have agreed to provide the service under contract. And Amtrak has offered to carry commuters on its "Virginian" train to ease congestion on the Interstates, where car and van pools, plus some cheaters, have repeatedly clogged the express bus lanes on the highways. COG reports that private commuter bus service has reached its lowest ebb, despite the commuters' increasing needs for transportation. While COG blames much of the bus decline on the expanding Metrorail system, its report reveals that MARC (Amtrak-B&O) commuter rail service gained passengers, even with the availability of parallel Metrorail lines. Next year MARC (Maryland Department of Transportation) will have 125-mph AEM7 electric locomotives and stainless steel passenger coaches, to give ridership a further boost.

Arlington County, Va., reported the most

confounds its critics

RAIL TRANSIT RIDERSHIP

Average Weekday Passengers, First Three Quarters of 1985

Light Rail	1984	1985	Change
Cleveland	17,455	16,600	−4.9%
Newark	14,566	17,391	+19.4%
Pittsburgh	14,570	17,600	+20.8%
San Diego	17,239	19,200	+13.7%
TOTAL	**63,830**	**70,791**	**+10.9%**
Rail Rapid Transit			
Atlanta	174,803	222,000	+27.0%
Baltimore	25,675	37,100	+44.5%
Boston	343,871	373,100	+8.5%
Chicago	522,933	531,300	+1.6%
Cleveland	20,605	18,400	−10.7%
New York	3,242,460	3,268,400	+0.2%
Philadelphia	351,353	351,000	−0.1%
San Francisco	219,208	227,100	+3.6%
Toronto	932,498	967,000	+3.7%
Washington	393,689	480,300	+22.0%
TOTAL	**6,227,095**	**6,475,700**	**+4.0%**
Total, excl. N.Y.	**2,984,635**	**3,207,300**	**+7.5%**
Commuter Railroad			
Boston	44,000	45,760	+4.0%
Chicago	219,000	228,000	+4.0%
Metro−North	133,700	140,000	+4.5%
Long Island	270,000	271,500	+0.5%
New Jersey Transit	130,000	140,000	+7.3%
Philadelphia	60,000	70,000	+16.4%
San Francisco	18,250	19,000	+4.0%
Transit Bus Service	17,645,128	17,786,289	+0.8%

Source: APTA Monthly Reports

spectacular results. Since two new rail lines began to serve the county, employment has begun to approach the total population of the county. Unemployment is only 3½%. Office vacancies are just 3½% despite the billions of dollars worth of new construction. Tax rates have declined from 1½% of market value to 0.95%, the lowest in the metropolitan area, a direct result of the highest concentration of rail service—which the taxpayers have voted three-to-one to pay for. The average Arlington resident makes over 100 transit trips per year, as compared to 75 in Chicago and 50 in Los Angeles, both of which are lower-income, more densely populated areas. Los Angeles has not missed this point. Even without federal aid, the Los Angeles County Transportation Commission broke ground Oct. 31, 1985, for a 22-mile light rail line.

With no change in rail service in Arlington County last year, other than more cars on trains, Metrorail's improved performance attracted 12% more riders; the systemwide increase was 16% as service was extended 14 miles to the Maryland towns of Bethesda and Rockville. Auto parking space at most stations is in very short supply, despite the provision of nearly 15,000 spaces.

This upbeat trend is expected to continue. In June, a new nine-mile rail line into Fairfax County is scheduled to open, which will provide an alternative to the bumper-to-bumper rush hour traffic on I-66 outside the Capital Beltway (I-495).

This service expansion has confounded rail critics who predicted increasing deficits. In FY 1985, Metrorail revenue exceeded budget, but expenses were far under budget. With improved cost control in the Metrobus operation, the Transit Authority refunded $8 million to its supporting jurisdictions and set aside $3 million for reserves. The cost per car-mile tumbled sharply. Metrorail earned 65% of its operating costs from fares, while the buses covered 38%. The system average was just over 50%, compared to 40% in the bus industry generally.

Meanwhile, the U.S. DOT has released a report that found that a rail line proposed to Dulles Airport would attract sufficient traffic to more than cover all operating costs, and would generate sufficient property appreciation to outweigh its construction cost. The line would be built in the median of the Dulles Access Road, now severely congested by commuters who choose not to ride the available buses. Highway advocates are criticizing the report before they have even read it.

• **San Mateo changes its mind.** Across the continent, San Mateo voters reversed their 20-year-old reluctance to join the Bay Area Rapid Transit District. Now that BART has overcome its teething problems, and is carrying more passengers every year, at a very low 18 cents per passenger-mile operating cost, San Mateo County has decided it wants in. A $150-million extension is now under way. With most bus costs running 25 cents per passenger-mile or higher, San Mateo folks know a good thing after they have seen it.

In San Francisco, the Muni Metro light rail lines are attracting one and one-half times as many riders as the previous Market Street surface operation, and two new lines are being engineered.

In San Diego, as construction proceeds on the East Urban trolley line, the original South Bay (SD&IV Railroad) line to San Ysidro gained another 14% in ridership last year, with no significant change in service. Most noteworthy, however, was the finding of the U.S. DOT that the San Diego Trolley had, despite its high quality service, the lowest operating cost per passenger-mile (12 cents) of any transit system of any kind or size in any city.

Pittsburgh's new light rail subway is demonstrating spectacular passenger appeal. The initial surge in ridership has continued right up to the latest reports, with increases of over 100% on the same service pattern, brought about by freeing trolleys from Triangle Traffic where they had no priority. Steel industry problems have not favored Pittsburgh's economy, but with improved transit, downtown business is up 20% near subway stops. Next year, construction should be completed on the Mt. Lebanon tunnel, to permit restoration of the Dormont line service, now temporarily discontinued. Only then can the 55 new articulated cars be employed in service.

Because of federal funding hold-ups, Buffalo has not been able to complete its light rail system, but has opened a 5.4-mile section, including a 1.2-mile surface Main Street Mall segment. Ridership has reached 17,000 on

COSTS PER PASSENGER MILE: RAIL VS. BUS

	Rail	Bus
San Diego	12.0c	23.9c
Atlanta - MARTA	15.6c	22.3c
Philadelphia - SEPTA rapid transit	17.1c	29.7c
East Bay (Oakland, Cal.) - BART ACT	17.3c	21.1c
Chicago CTA	17.5c	30.8c
Chicago RTA	16.7c	
San Francisco MUNI	21.6c	25.0c
USA Average	22.3c	29.2c
New York City NYCTA	24.2c	32.8c
Cleveland GCRTA	28.3c	22.9c
Washington, D.C. - WMATA	29.6c	33.5c
Boston - MBTA	33.3c	50.0c

Source: UMTA-MA-06-0107-85-1 December 1984 (Section 15 Report)

(The above data was selected for its availability. Certain other metropolitan areas did not have the necessary data available, or in correct form.)

weekdays, a good omen for the full 6.4-mile line that is to be in revenue service by next fall. Snow should no longer be a serious deterrent to mobility on Main Street.

Baltimore is enjoying strong patronage growth as its Metro attracts 44.5% more riders than last year on an expanded schedule, with negligible operating problems. A six-mile extension into the suburbs is well under way and is expected to shape a new suburban city.

The 4½-mile Newark City Subway is also sharing in the transit renaissance, with its rehabilitation largely completed. Ridership is up 11% over last year. New Jersey Transit's huge commuter rail operation also reports growing ridership, up 7.3% over last year. Electrification work continues on the Long Branch line, now that the Morris & Essex has been converted to high voltage. A large fleet of new buses has also brought 5% growth to that portion of N.J. Transit's business. Revenue growth has helped to avoid a fare increase for FY 1986.

Expansion in Atlanta has brought invigorating rail growth. The North-South line now extends from Brookhaven to Lakewood, 15 miles, attracting 27% more riders than the shorter version did last year. New cars continue to arrive, and extensions are under construction. Parking charges have been instituted at the stations in order to increase revenue and to ration scarce space.

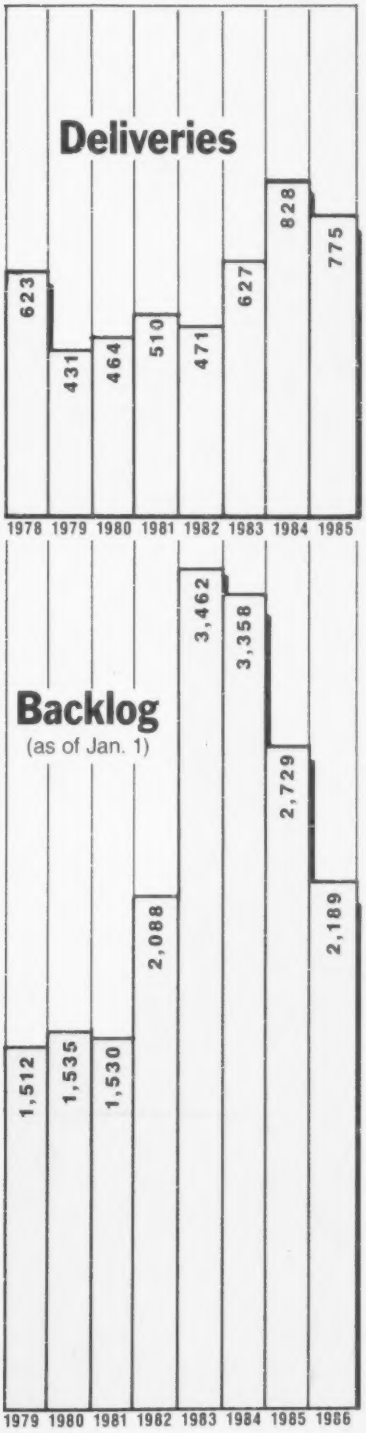
Portland and Sacramento are well along with the construction of new LRT lines from downtown malls to the suburbs, with both using parts of former interurban rail rights-of-way. Service planning is now under way. San Jose is beginning to follow, and studies are in progress in Houston, Columbus and other cities. A market analysis in Columbus found that 60% of the population dislikes driving downtown, preferring rail to bus transit by a 2-to-1 margin.

Already out of the study stage, and advancing fast toward construction, is Dallas with its plan for a light rail system that will total 160 miles by the time it is completed in the year 2010.

In Philadelphia, new airport trains are at-

(Continued on page 77)

Passenger-car market at a glance



These cars were delivered in 1985:

Purchaser	No. of cars	Type	Builder
Amtrak	3	Intercity (prototype)[1]	Budd
Atlanta (MARTA)	42	Rapid transit	Hitachi, C. Itoh
Chicago (CTA)	112	Rapid transit	Transit America
Cleveland	45	Rapid transit	Tokyu Car Corp.
Miami (MDTA)	70	Rapid transit	Transit America
New York (LIRR)	74	Commuter	Transit America
New York (Metro-North)	12	Commuter	Transit America
	19	Commuter	Bombardier
New York (NYCTA)	94	Rapid transit	Kawasaki/Nissho Iwai
Pittsburgh (PAT)	35	Light rail	Siemens-Duewag
Portland (Tri-Met)	19	Light rail	Bombardier
Sacramento	3	Light rail	Siemens-Duewag
San Diego (MTDB)	6	Light rail	Siemens-Duewag
San Francisco (BART)	4	Rapid transit	Alsthom
San Francisco (CALTRANS)	63	Commuter	Nippon Sharyo
Vancouver (BC Transit)	100	Light rail	UTDC
Washington (WMATA)	74	Rapid transit	Breda
Total	**775**		

[1]Car shells manufactured by Budd, assembled by Amtrak at Beech Grove.

Work goes forward on this undelivered backlog:

Purchaser	No. of cars	Type	Builder
Atlanta (MARTA)	54	Rapid transit	Hitachi, C. Itoh
Baltimore (MdMTA)	28	Rapid transit	Transit America
Boston (MBTA)	58	Rapid transit	Can-Car (UTDC)
	50	Light rail	Kinki-Sharyo
	34	Commuter	Messerschmitt-Bolkow-Blohm GmbH.
Buffalo (NFTA)	1[2]	Light rail	Tokyu Car Corp.
Chicago (CTA)	154	Rapid transit	Transit America
Detroit (SEMTA)	12	Advanced light rail transit	UTDC
Miami (MDTA)	10	Rapid transit	Transit America
New York (CDOT)	20	Commuter	Bombardier
New York (LIRR)	100	Commuter	Transit America
New York (Metro-North CDOT)	54	Commuter	Mitsui/Tokyo Car
New York (NYCTA)	225	Rapid transit	Westinghouse Amrail
	825	Rapid transit	Bombardier
PATH (PA of NY/NJ)	95	Rapid transit	Kawasaki Heavy Industries Ltd.
Pittsburgh (PAT)	20	Light rail	Siemens-Duewag
Portland (Tri-Met)	4	Light rail	Bombardier
Sacramento	23	Light rail	Siemens-Duewag
San Francisco (BART)	150	Rapid transit	Alsthom
San Francisco (CALTRANS)	10	Commuter	Nippon Sharyo
Toronto (TTC)	4	ICTS	UTDC Group
	126	Rapid transit	UTDC Group
	52	Light rail	UTDC Group
Vancouver (BC Transit)	14	Light rail	UTDC
Washington (WMATA)	66	Rapid transit	Breda
Total	**2,189**		

[2]Damaged in shipment; part of original order of 27 LRVs.

Orders likely to develop in 1986:

Purchaser	No. of cars	Type
Dallas (DART)	100	Light rail
Los Angeles (SCRTD)	30	Rapid transit
New York (Metro-North)	12	Commuter
Philadelphia (SEPTA)	28	Rapid transit
Sacramento	6	Light rail
San Diego (MTDB)	10-14	Light rail
VIA Rail-Canada	130	Intercity
Total	**316-320**	

The five year (1987-1991 outlook):

Purchaser	No. of cars	Type
Amtrak[3]	60-140	Intercity
Atlanta (MARTA)	0-40	Rapid transit
Boston (MBTA)	60	Commuter
Chicago (CTA)	100-400	Rapid transit
Chicago (Metra)	48-93	Commuter
Cleveland (GCRTA)	2-28[4]	Rapid transit
Detroit (SEMTA)	0-25	Commuter
Los Angeles (LACTC)	44-60	Light rail
Los Angeles (SCRTD)	90-110	Rapid transit
Miami (MDTA)	100	Rapid transit
New York (NYCTA)	416[5]	Rapid transit
Philadelphia (SEPTA)	35-70	Commuter
	70	Light rail
Portland (Tri-Met)	0-35	Light rail
Sacramento	0-10	Light rail
San Diego (MTDB)	6-15	Light rail
Toronto (GO Transit)	23-64	Commuter
Vancouver (BC Transit)	0-30	Light rail
Washington (WMATA)	200-300	Rapid transit
Total	**1,254-2,066**	

[3]1983 projection.
[4]Scheduled for rehabilitation.
[5]Between 1987-1989; possible 200 per year thereafter as necessary to retain approximate average fleet age.

REVENUES AND EXPENSES OF RAILWAYS

Third quarter figures of calendar year 1985

(Dollar figures are stated in thousands, i.e., with last three digits omitted)

		Operating revenues				Operating expenses													
						Way & structures			Equipment										
		Freight	Other	Total 1985	Total 1984	Total 1985	Total 1984	1985 Deprec.	Total 1985	Total 1984	1985 Deprec.	Total 1985	Total 1984	Operating 1985	Ratio 1984	Income after fixed charges 1985	Income after fixed charges 1984	1985 Net Ry. operating income	Net income 1985	Net income 1984
Amtrak	3 mos.	—	228,028	228,028	204,551	62,863	21,412	25,485	91,561	99,641	20,805	393,856	371,678	172.72	181.80	(159,776)	(158,556)	(165,828)	(159,776)	(158,556)
	9 mos.	—	620,992	620,992	550,629	183,099	153,346	66,894	286,216	285,491	61,856	1,200,394	1,148,691	193.30	208.61	(562,054)	(578,790)	(579,402)	(562,054)	(578,790)
Atchison, Topeka & Santa Fe	3 mos.	523,072	10,551	533,623	592,472	75,034	84,885	14,865	126,348	131,197	24,077	485,625	518,213	91.00	87.46	47,572	70,030	35,442	34,782	42,439
	9 mos.	1,592,150	33,607	1,625,757	1,748,013	256,214	254,839	43,681	379,197	405,245	71,908	1,507,775	1,571,157	92.74	89.88	122,453	168,798	91,265	95,063	109,117
Baltimore & Ohio	3 mos.	237,254	8,856	246,110	260,596	37,834	47,244	10,517	60,019	58,820	7,461	230,277	247,746	93.56	95.06	12,517	9,394	19,781	11,002	8,130
	9 mos.	741,465	29,479	770,944	807,865	126,429	141,619	31,027	204,126	178,546	22,045	744,055	750,228	96.51	92.86	26,486	51,805	42,380	25,646	37,682
Boston & Maine	3 mos.	27,403	1,235	28,638	32,203	4,091	4,428	442	9,622	9,149	80	28,698	28,945	100.20	89.88	451	3,769	14	451	3,769
	9 mos.	83,868	3,803	87,671	95,308	12,168	13,294	1,272	28,099	28,000	208	86,423	88,519	98.57	92.87	2,530	8,011	1,470	2,530	8,011
Burlington Northern	3 mos.	981,674	20,664	1,002,337	1,110,330	145,707	151,765	43,107	180,928	188,402	16,040	786,308	844,332	78.44	76.04	234,560	254,520	126,110	144,631	145,308
	9 mos.	2,995,524	64,109	3,059,633	3,330,128	464,726	456,711	127,877	549,311	585,070	48,714	2,453,551	2,612,176	80.19	78.44	629,851	730,876	354,092	377,831	422,500
Chesapeake & Ohio	3 mos.	250,395	9,238	259,633	294,867	32,842	35,384	9,182	53,548	61,593	3,913	206,048	227,742	79.36	77.23	64,982	89,160	33,075	44,465	59,151
	9 mos.	746,191	24,867	771,058	846,406	102,063	110,601	27,096	158,482	183,484	11,568	629,466	696,813	81.63	82.32	167,723	204,001	86,287	112,398	140,132
Chicago & North Western	3 mos.	180,758	24,527	205,285	221,081	34,368	27,614	5,183	48,930	53,874	3,778	192,743	195,904	93.89	88.61	2,233	20,300	12,394	5,642	17,675
	9 mos.	542,608	75,791	618,399	676,481	113,523	96,236	19,334	146,025	162,193	11,874	598,291	620,290	96.74	91.69	(10,277)	35,629	22,107	(4,693)	30,854
Conrail	3 mos.	741,136	28,992	770,128	827,711	111,768	119,780	22,680	165,461	178,356	34,216	659,261	698,301	85.60	84.36	120,258	140,835	88,721	120,258	140,835
	9 mos.	2,297,264	86,198	2,383,462	2,539,275	350,066	367,122	67,327	524,777	562,381	104,972	2,093,502	2,151,086	87.83	84.71	329,743	410,644	223,416	329,743	410,644
Delaware & Hudson	3 mos.	28,055	301	28,356	32,010	4,794	5,519	272	8,289	10,394	145	27,988	32,442	98.70	101.34	(32)	(706)	371	(32)	(706)
	9 mos.	81,086	1,229	82,315	94,225	14,070	15,997	795	24,274	28,620	456	84,284	95,754	102.39	101.62	(2,457)	(2,797)	(1,909)	(2,457)	(2,797)
Denver & Rio Grande Western	3 mos.	77,185	1,331	78,516	91,623	10,947	13,840	3,658	14,694	17,411	3,321	68,301	80,846	86.98	88.23	9,543	10,583	6,640	5,941	7,331
	9 mos.	244,169	3,803	247,972	273,084	37,979	42,386	10,810	45,544	52,457	9,969	219,442	245,584	88.49	89.92	27,579	25,704	18,442	17,122	17,365
Elgin, Joliet & Eastern	3 mos.	14,525	6,244	20,769	17,831	4,123	3,805	619	3,107	1,867	1,970	20,189	17,826	97.20	99.97	2,326	1,638	(84)	1,662	1,221
	9 mos.	45,637	19,670	65,307	72,025	10,696	11,271	1,789	9,986	10,508	6,007	62,247	64,331	95.31	89.31	7,779	12,572	56	4,775	7,637
Florida East Coast	3 mos.	26,318	505	26,823	26,482	4,592	4,014	1,202	5,337	4,668	1,479	22,664	21,281	84.49	80.36	7,739	9,428	820	4,400	5,679
	9 mos.	84,703	1,496	86,199	88,647	14,228	12,738	3,683	16,700	14,836	3,465	68,667	65,540	79.66	73.93	29,872	35,293	4,749	17,089	20,950

Grand Trunk Western	3 mos	77,299	3,552	80,851	81,043	10,231	10,580	1,670	17,119	18,826	1,606	80,203	82,500	99.19	101.79	(968)	(3,533)	866	77	(2,292)
	9 mos	245,265	10,117	255,382	251,352	31,596	30,837	4,995	53,637	57,352	4,916	252,317	248,631	98.79	98.91	(313)	(2,777)	3,939	3,895	451
Illinois Central Gulf	3 mos.	189,207	17,958	207,165	229,382	29,138	29,704	11,582	61,823	70,511	5,012	199,243	213,541	96.17	93.09	5,572	35,832	3,561	3,960	29,179
	9 mos.	617,052	55,388	672,440	724,891	88,847	88,920	34,857	201,896	210,521	15,228	640,015	675,164	95.17	93.14	16,688	65,871	26,377	13,065	55,299
Kansas City Southern	3 mos	76,165	3,692	79,857	84,745	12,377	11,920	3,770	16,708	17,010	5,344	66,232	69,368	82.93	81.85	12,047	14,059	9,012	7,305	8,077
	9 mos	230,372	10,792	241,164	248,116	35,673	36,393	10,972	52,896	56,319	16,145	205,562	209,836	85.23	84.57	30,109	32,664	24,112	18,258	19,676
Missouri-Kansas-Texas	3 mos.	65,488	2,862	68,350	71,686	13,226	15,005	2,552	16,323	16,424	1,720	64,778	67,255	94.77	91.81	1,240	3,196	4,102	1,240	3,196
	9 mos.	196,319	9,127	205,446	212,553	39,159	40,164	7,642	48,989	51,810	5,286	194,071	198,709	94.46	93.48	4,054	7,934	6,656	(1,746)	7,934
Missouri Pacific	3 mos	387,426	12,583	400,009	462,477	58,733	67,832	13,254	95,035	98,312	18,509	378,934	394,818	94.73	85.37	1,346	63,830	34,955	12,907	44,555
	9 mos	1,220,021	35,237	1,255,258	1,356,999	185,434	194,205	37,926	302,574	296,954	55,659	1,181,757	1,189,089	94.14	87.62	31,163	152,184	91,430	42,129	106,642
Norfolk & Western	3 mos	391,863	16,461	408,324	458,695	67,190	68,187	10,752	87,965	85,845	13,534	334,560	344,164	81.93	75.03	130,402	140,414	22,733	78,721	83,157
	9 mos	1,236,216	50,614	1,286,830	1,351,936	184,491	212,084	32,370	259,956	253,488	39,682	1,013,319	1,055,650	78.74	78.08	365,689	368,796	127,710	217,937	217,901
St Louis Southwestern	3 mos	93,853	1,598	95,451	107,094	14,825	13,360	4,543	22,811	28,668	5,373	84,170	101,494	88.18	94.77	11,219	10,127	7,073	7,011	7,187
	9 mos	290,009	4,743	294,752	331,223	43,329	41,608	13,527	76,891	83,847	16,444	276,485	299,782	93.80	90.50	21,285	41,657	10,513	13,531	28,436
Seaboard	3 mos	615,953	11,815	627,768	675,258	88,506	89,183	18,231	118,111	169,413	(8,284)	540,636	587,727	86.12	87.03	77,410	82,787	63,107	49,483	54,438
	9 mos	1,923,619	47,295	1,970,914	2,082,387	264,763	258,655	54,575	460,438	509,129	29,933	1,720,465	1,775,309	87.29	85.25	251,327	304,101	182,228	171,379	200,988
Soo Line	3 mos	152,672	5,594	158,266	82,259	35,198	16,816	7,360	40,097	17,597	3,660	158,815	73,106	100.34	88.87	(8,894)	12,652	5,172	(3,687)	7,473
	9 mos	429,550	13,692	443,242	237,652	90,539	46,627	18,707	110,767	53,635	10,195	438,340	220,072	98.89	92.60	(17,218)	22,802	17,072	(6,632)	13,962
Southern	3 mos.	407,264	9,156	416,420	444,152	59,822	69,025	18,464	83,938	90,329	19,011	329,702	359,986	79.17	81.05	84,224	89,976	60,964	57,116	52,033
	9 mos.	1,254,220	30,104	1,284,324	1,349,464	185,818	191,353	55,757	267,837	271,833	57,306	1,031,207	1,079,961	80.29	80.02	250,637	273,773	161,525	154,951	158,668
Southern Pacific	3 mos	497,350	15,322	512,672	542,692	63,759	55,711	23,281	136,696	156,817	19,760	508,096	541,540	99.10	99.78	43,464	11,964	11,855	50,360	23,035
	9 mos	1,523,196	48,439	1,570,635	1,650,931	206,210	172,341	69,495	433,661	479,510	60,045	1,577,384	1,642,458	100.46	99.48	43,591	44,153	5,375	55,174	82,844
Union Pacific	3 mos.	441,427	5,738	447,165	462,106	68,674	71,502	17,408	88,364	102,730	22,377	396,509	408,373	88.67	88.37	64,485	47,127	25,967	39,754	31,604
	9 mos.	1,402,471	16,000	1,418,471	1,433,442	213,809	214,938	51,593	281,152	320,474	68,057	1,235,465	1,285,917	87.09	89.70	201,551	135,248	114,322	132,710	89,925
Western Pacific	3 mos	40,169	740	40,909	37,594	5,031	7,791	1,220	8,967	7,039	1,223	44,510	41,055	108.80	109.20	(6,149)	(7,544)	788	(1,760)	(4,129)
	9 mos	114,211	1,870	116,081	116,057	21,209	20,631	2,985	28,148	24,381	3,138	134,260	123,018	115.66	105.99	(24,287)	(15,898)	(3,585)	(9,693)	(7,392)

Source: Interstate Commerce Commission

100 YEARS AGO IN

(January 1886)

Senator Coke has introduced a bill in the United States senate to establish a national live stock highway. It provides that public lands in range 41, lying along the east line of the state of Colorado, and which are about two miles in width, shall be reserved from settlement for ten years and set apart as a national live stock highway, to be used for live stock passing from one state to another or to market.

* * *

A steam motor railroad is being built between Colton and San Bernardino, Cal., a distance of 5 miles.

* * *

The adoption of the cable system for street car propulsion in Chicago has now after a trial of five years been proved a complete success. The last report of the Chicago City railway company, to whom is due the credit of introducing this system east of San Francisco, states that the cables and machinery have operated with great satisfaction throughout the year.

* * *

Los Angeles, Cal., has four lines of street cars in operation and about fifteen miles of road; one more is being built and two more are ready to commence construction.

* * *

The printed bill of fare for the Chicago & North-Western dining cars on New Year's day was a very attractive work of art on its exterior pages, while the *menu* presented inside is worthy of any first class hotel in the country. How such a spread can be served for 75 cents is a mystery which can only be solved on the theory that the company enjoys making its patrons comfortable even if it loses money by doing so.

* * *

Five important ship canal projects are advocated in this country, as follows: The enlargement of the Erie canal, the construction of the Hennepin canal to connect lake Michigan with the Mississippi river, the Columbus canal in Ohio to connect lake Erie with the Ohio river, the proposed canal across Florida, and the big ditch that has been commenced across the Cape Cod peninsula in Massachusetts. All these schemes are calling for national and state aid to a vast amount, at the very time when politicians are proposing to revoke the grant of wilderness and desert land made to a number of railway companies and in the faith of which several great roads have been and are being constructed. It is difficult to see any consistency in voting millions of hard cash for the construction of canals by government in competition with railways built by private capital, and at the same time to take away from important railways the comparatively little assistance which has been given them in the shape of land grants.

Rail transit review and outlook

(Continued from page 48)

tracting triple the patronage of the express buses they replaced. With the Center City Commuter Railroad Connection downtown, commuter rail ridership is up 16½%. Following the introduction a few years ago of Kawasaki cars into the light rail subway, ridership jumped 43%. Philadelphia's mayor has taken a position favoring improved light rail operations.

Chicago's commuter rail services are enjoying a comeback from their loss of financial support a few years ago. Ridership increased 4% overall, with the electric South Shore, having acquired new cars and new owners, attracting 10% growth. Rapid transit in Chicago also had a good year, with the extension of service to O'Hare Airport offering needed relief to severe expressway congestion. A Southwest line is now under construction.

Boston has seen a turnaround in commuter rail fortunes after the disastrous bridge fires of last year. A new North Station train platform has been built, 34 cars are on order, and ridership is up 4% even before all of the service disruptions have been cleared. MBTA and B&M displayed heroic efforts in overcoming the disruptions they faced last year. The MBTA also put a Red Line extension into service to Alewife Parkway, resulting in an 8% rider gain on the rapid transit system. On order are 50 light rail cars for the Green Line and 58 cars for the Red Line. The Southwest Corridor Project is in the home stretch to 1) replace the Orange Line elevated to Forest Hills, 2) restore Amtrak to its main line, 3) reopen Back Bay Station, and 4) restore commuter rail service to Needham.

• **Fund-finding.** As federal aid for transit shrinks, the improved cost effectiveness and increased revenue potential of rail transit looms ever more important. The federal aid program is a two-edged sword. While efficiency and effectiveness argue strongly for rail transit, some transit officials are haunted by the specter of reduced or lost federal aid. Others, like Port Authority Transit Corp. (PATCO) years ago, and San Diego, Los Angeles and Dallas today, have opted to do what is best and necessary, even without federal aid.

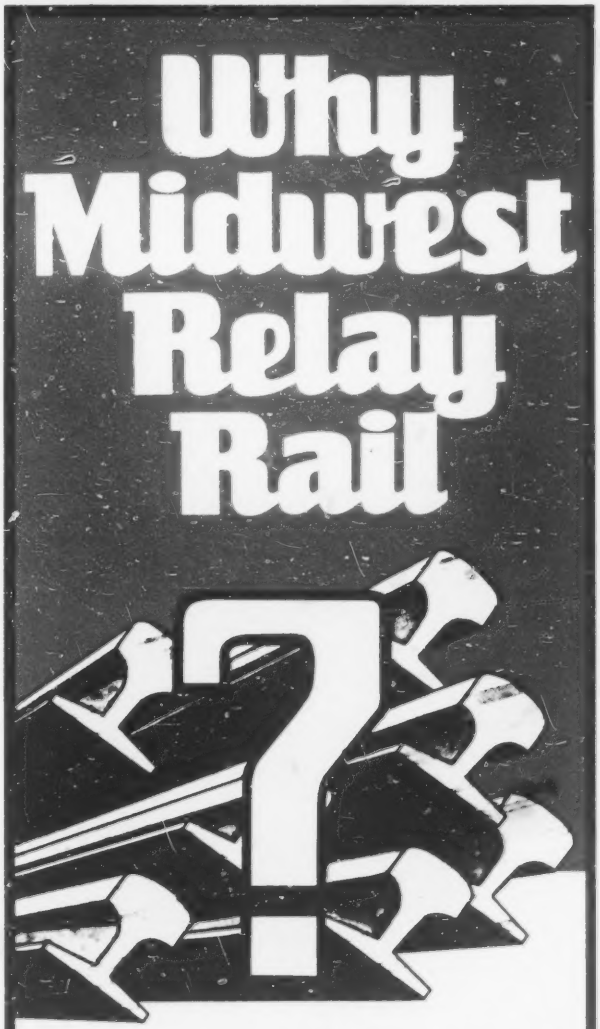
San Diego used California's transit funding program to build its first line; Los Angeles has augmented this program with a local tax increment to build a light rail line. Dallas has obtained voter approval for an increased local tax to support its $3.6-billion dollar program, as BART and MARTA (Atlanta) did but without their dependence on supplementary federal aid. Arlington County has shown that property appreciation resulting from new rail lines can fund part of the cost without any new taxes. Maryland pools highway and transit funding from a common transportation fund.

Other analysts are looking at the motor freight industry for funding ideas. Many truck lines arrange with county or state industrial development authorities to fund and build the necessary terminal facilities with full tax exemption, and then lease them at tax deductible rentals. Rail transit could use a similar technique, as Philadelphia did when it electrified the former Reading Newtown Branch to Fox Chase, and purchased 75 multiple-unit commuter cars and 270 subway cars. There was no federal aid for any of these very successful projects.

It is interesting to note that the non-federally aided projects have consistently earned 75% to 85% of their operating costs from the farebox, a far higher ratio than for federally aided projects. The only problem is that the arch competitor, the federally funded highway, will obtain priority funding if transit aid is withdrawn. That will unnaturally tilt local political decisions to the future detriment of the community.

Federal aid does not come cheap. The worst example was the comprehensive effort to design a new standard bus, the Transbus. After spending tens of millions of federal dollars on a few prototypes, bids were requested from manufacturers to build the buses. Not one firm in the entire world would bid on the "perfect" bus. The transit industry does not need that kind of federal aid. What it does need is treatment equal to that offered to the highway builders. ■

(Material for this article was contributed by E.L. Tennyson, a professional engineer with 35 years experience in industry and government.)



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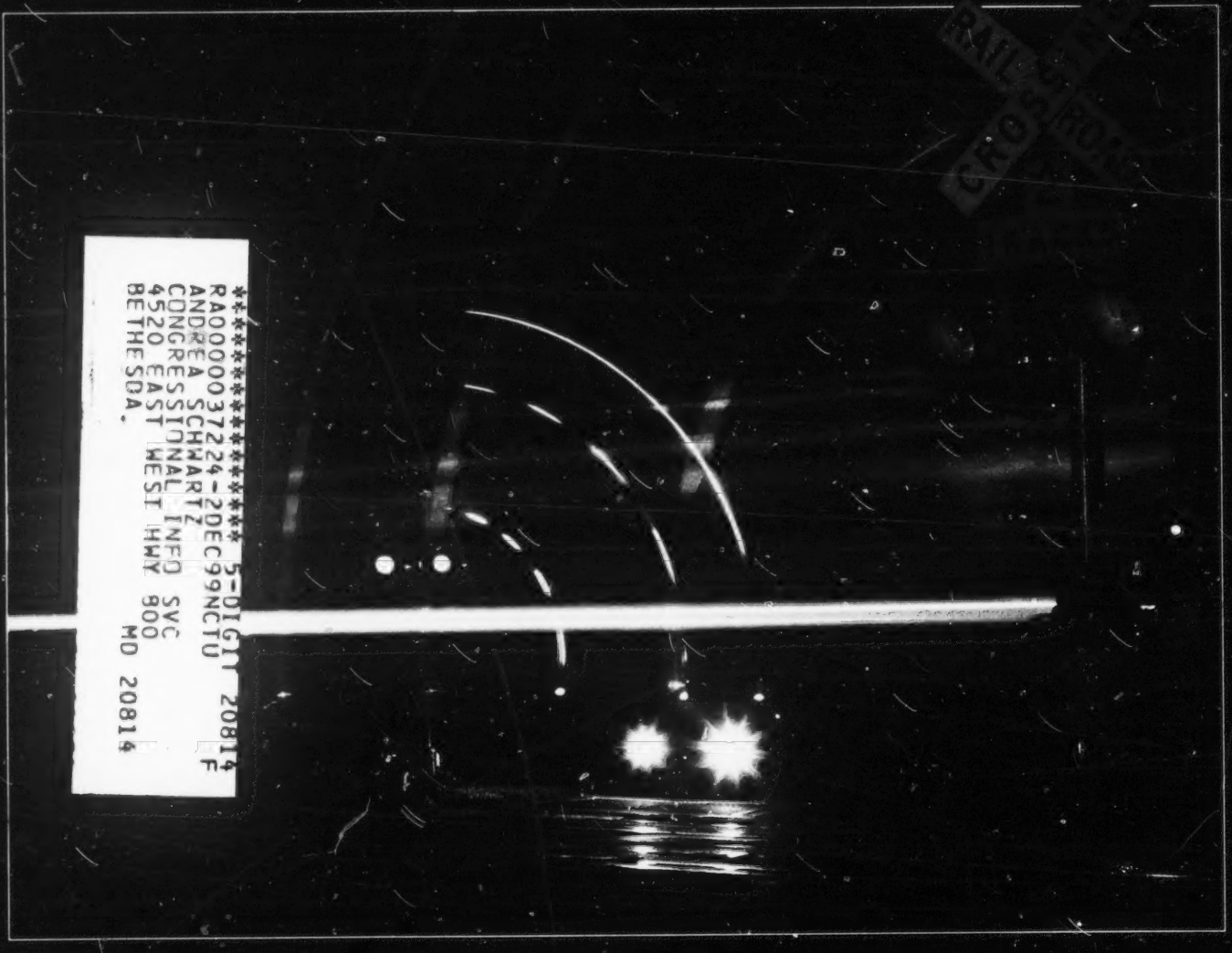
$4.5 billion-dollar TRX: Just a beginning



Crash at the crossing

High-productivity railroading: The consolidation route

RAILWAY AGE
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February 1986

Features

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There are several approaches to achieving greater efficiency via consolidation, but each requires a breaking down of regulatory, institutional and labor barriers.

28 Crisis at the crossing

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33 Locomotive shops eye the short lines

The proliferation of short lines offers both pluses and minuses to facilities that in lean times are anxiously scouring the country for additional business.

36 Take-off time for TankTrain?

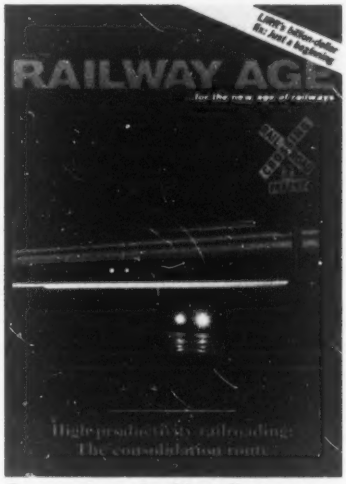
Having demonstrated that it can help solve shippers' logistical problems and help win railroads new business, the GATX system could be headed for growth.

38 Bearings: Old supplier, new market

With the market for journal bearings fast drying up, Magnus is producing support bearings for traction motors in its highly-automated, sole surviving plant.

43 Long Island's billion-dollar fix

A $1.1-billion capital program has gone a long way toward shaping up this overworked, 152-year-old commuter railroad—but many important needs remain unmet.



Cover photo by Kent Patterson

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Inside

The great freight car turnaround

LUTHER S. MILLER

"There is perhaps no more uneconomical appliance than the railway freight car as utilized today," New York Air Brake's L.K. Sillcox told a Yale University audience 30 years ago. "It has been estimated that 5% of a freight car's life is spent running loaded, 3% running empty, and 92% in standing on sidings or in shops, or engaged in terminal movements."

It may have been a hell of a way to run a railroad—but that's the way things were, and they stayed that way for many years. In the 1970s, when railroads began their push for deregulation, they complained that they were able to buy only 60,000 new cars a year; they needed 105,000.

At the age of 99, the redoubtable Dr. Sillcox still lectures on railroads; but he no longer talks about car shortages.

The railroads are still telling Congress they need more capital than they can raise with a rate of return that is under 5% (see below). But they no longer talk about 105,000—or even 60,000—new cars a year. On p. 21, you will read about the 1986 capital plans of just three rail systems that together will spend more than $1.5 billion—but you will read very little about freight cars.

Behind this startling turnaround is vastly increased utilization. One reason for this is the deregulation fight that railroads did finally win. Another is the across-the-board leap in productivity achieved through consolidations, which is the subject of the article that starts on p. 24.

Revenue adequacy: An elusive goal

The ICC said Jan. 6 it had established 15.8% as the cost of railroad capital—which means rails need to earn that much to be revenue-adequate. The ICC reported a few days later that as a group railroads earned 4.65% in the year ended last Sept. 30. This was the road-by-road story:

Southern District:

Florida East Coast	3.67%
Illinois Central Gulf	2.31%
Seaboard System	5.34%
Southern	6.67%

Western District:

Santa Fe	3.49%
Burlington Northern	8.29%
Chicago & North Western	2.62%
Denver & Rio Grande Western	4.16%
Kansas City Southern	7.49%
Missouri-Kansas-Texas	3.04%
Missouri Pacific	3.69%
St. Louis Southwestern	2.25%
Soo Line	4.33%
Southern Pacific	0.78%
Union Pacific	4.58%
Western Pacific	0%

Eastern District:

Baltimore & Ohio	2.92%
Boston & Maine	1.25%
Chesapeake & Ohio	4.90%
Conrail	5.64%
Elgin, Joliet & Eastern	0%
Grand Trunk Western	2.23%
Norfolk & Western	5.25%

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Editorial and Executive Offices
New York, N.Y. 10014, 345 Hudson Street
212/620-7200 (Telex 425421 SIMB UI)

ROBERT G. LEWIS, Publisher
LUTHER S. MILLER, Editor

Managing Editor: Judy McCusker
Special Projects Editor: Deborah Meyers
Contributing Editor: William D. Middleton
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Western Editorial Offices
Chicago, Ill. 60602, 29 E. Madison St.
312/641-5815

GUS WELTY, Senior Editor
Associate Editor: Frank Malone
Associate Editor: Bill Fahrenwald
Engineering Editor: William J. Semioli
Editorial Assistant: Wanda Welty

Washington Office
Silver Spring, Md. 20910, 10214 Southmoor Dr.
301/593-2924

Associate Editor: John H. Armstrong

International Offices
Falmouth, Cornwall, TR11 4RJ, England
P.O. Box 8 (Telex: 45320 IRJFAL G)
Telephone: 44-326-313945

International Editors: Michael Knutton, David Briginshaw

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Market Outlook

Facilities

London Underground Limited: Awarded a $24-million contract to Westinghouse Cubic Ltd. for passenger control gates and station monitoring equipment. This follows a $64-million contract awarded last fall for ticket machines and computers for an automatic fare collection system.

Metropolitan Atlanta Rapid Transit Authority: Awarded a $23.3-million contract to the joint venture of J. A. Jones Construction Co./Mitchell Construction Co. for construction of the Chamblee Station on MARTA's North Line in DeKalb County. The station will be in a predominantly industrial neighborhood adjacent to Peachtree-DeKalb Airport.

Seaboard System: Completed a new intermodal facility in New Orleans, La., at a cost of $6.8 million. Tracks at the 30-acre site, which is adjacent to Seaboard's Gentilly Yard, permit up to 60 conventional piggyback cars to be spotted for loading or unloading. There is also trackside parking for 120 trailers or containers and an additional 380 bays for off-track parking. Seaboard recently completed new intermodal facilities at Orlando, Fla., Louisville, Ky., and Evansville, Ind.; terminals are also under construction at Tampa and Jacksonville, Fla., and Atlanta, Ga.

Equipment

Genstar Cement Co.: Has acquired 40 100-ton Twin-Hopper cars from Pullman Leasing Co. under a five-year lease—the first major order for the newly-introduced 3,148-cubic-foot-capacity car. The car is a re-engineered and rebuilt 4,427-cubic-foot-capacity covered hopper car. The center hopper of the original three-hopper car is removed, shortening it to 39 feet, 3 inches; the 100-ton trucks are retained. Existing trough hatches are replaced with four 30-inch chemical-type hatches. The car is equipped with the Pullman Leasing "Sur-Latch" design aluminum hatch cover with a single-latch-over bar. According to Pullman Leasing, the rebuilt car will handle 105 tons, a 25% increase over cars previously used in Genstar service.

Revenue freight carloadings

Commodity	Jan. 4 week	Dec. 28 week	Dec. 21 week	Dec. 14 week
Grain	20,783	17,482	26,192	25,979
Other farm products	3,178	2,870	4,382	4,518
Metallic ores	6,890	8,324	11,158	12,442
Coal	80,242	72,260	116,597	123,338
Crushed stone, gravel and sand	7,461	5,044	8,967	11,012
Nonmetallic minerals	7,320	6,966	10,352	10,588
Grain mill products	8,496	8,184	9,804	10,649
Food and kindred products	7,450	7,236	10,715	11,648
Primary forest products	8,923	5,878	10,690	11,400
Lumber and wood products except furniture	4,644	4,384	6,951	6,730
Pulp, paper and allied products	12,163	10,623	13,415	13,313
Chemicals and allied products	21,013	20,107	23,623	22,279
Petroleum products	4,187	3,754	4,740	4,640
Stone, clay and glass products	7,376	6,005	7,943	9,028
Coke	4,695	4,284	4,488	4,474
Metals and products	7,341	6,041	7,393	7,750
Motor vehicles and equipment	7,329	10,129	18,348	24,022
Waste and scrap materials	5,357	4,251	7,617	8,250
Forwarder and shipper assn. traffic	3,972	3,808	6,268	6,347
All other carloads	42,486	42,368	65,040	64,348
LCL traffic	67	70	98	154
Total Cars Loaded	**271,373**	**250,968**	**374,781**	**392,909**
% change from previous year	3.4	7.1	(0.9)	1.5
Estimated revenue ton-miles (billions)	12.9	12.4	17.6	18.0
% change from previous year	6.5	4.0	0.1	0.3

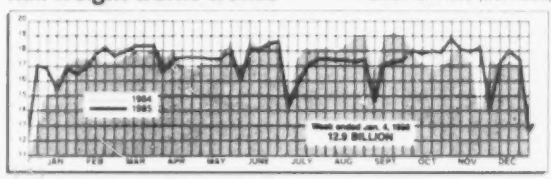
Total:	**1986**	**1985**	**% change**
1 week	12.9	12.1	6.5

Piggyback loadings

	Dec. 28 week	Dec. 21 week	Dec. 14 week
Trailers/containers	61,288	94,565	95,585
Cumulative total, 52 weeks		**% change from 1984**	
Trailers/containers	4,515,878	(1.1)	

Rail freight traffic trends

Billion ton-miles (Estimated)



Source: Association of American Railroads

Freight cars

	DELIVERED December 1985	DELIVERED 12 months 1985	DELIVERED 12 months 1984	ORDERED December 1985	ORDERED 12 months 1985	ORDERED 12 months 1984	ON ORDER AND UNDELIVERED Jan. 1, 1986	Average Backlog 1985	Average Backlog 1984
Built new by carbuilders	714	11,674	12,396	558	9,510	15,054	1,759	3,405	5,969
Built new in RR shops	0	406	0	0	0	406	0	23	185
Built new—total	**714**	**12,080**	**12,396**	**558**	**9,510**	**15,460**	**1,759**	**3,428**	**6,154**
Rebuilt	0	0	0	0	0	0	0	0	0
TOTAL	**714**	**12,080**	**12,396**	**558**	**9,510**	**15,460**	**1,759**	**3,428**	**6,154**
Locomotives (new and rebuilt)	69	636	569	N/A	N/A	N/A	52	207	167

Source: Transportation Div., AAR and American Railway Car Institute

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